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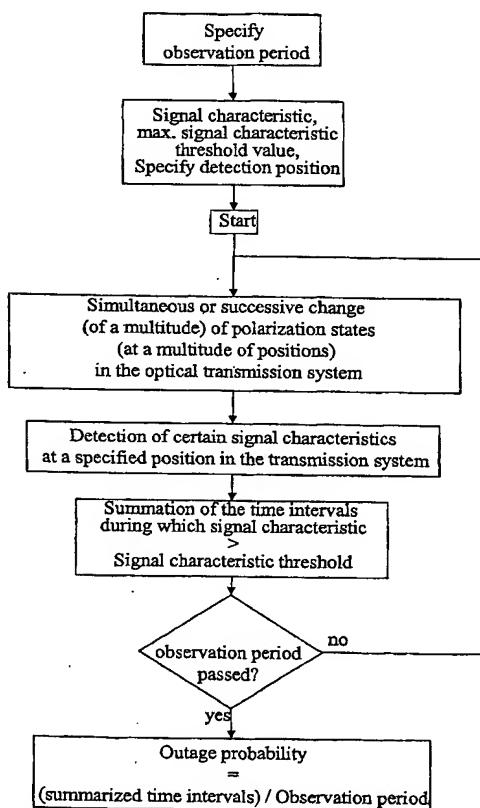
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(54) Title: PROCESSES AND DEVICES FOR THE DETERMINATION OF A PMD-INDUCED OUTAGE PROBABILITY OF AN OPTICAL TRANSMISSION SYSTEM



(57) **Abstract:** The invention relates in particular to a process for the determination of the PMD-induced outage probability of an optical transmission system. For this purpose the invention proposes a process whereby during a specified/specifiable observation period ( $T_{\text{total}}$ ), the polarization states of the optical transmission system and/or the optical signals transmitted by the optical transmission system are changed by applying a targeted intervention in at least one position of the transmission line (10, 11, 12, 13a, 13b, 14, 15, 20), and at a second position which is interposed at least one place downstream from the first position of the optical transmission line (10, 11, 12, 13a, 13b, 14, 15, 20), a specified/specifiable signal characteristic (BER) is qualitatively measured and checked for its adherence to a specified/specifiable threshold condition ( $BER_{\text{th}}$ ) and the PMD-induced outage probability of the optical transmission system is calculated on the basis of the ratio between the length of that share of the time ( $T_{\text{out}}$ ), during which the measured signal characteristic fails to meet the threshold condition ( $BER_{\text{th}}$ ) to the length of the observation period ( $T_{\text{total}}$ ).

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